

The present invention is directed to a process for ensuring that a certain data set, for example, will be transmitted to its remote location within a certain predetermined time period from its generation time or from the time it is supplied to the transmitting means. A key step in the process is continually monitoring from the time the data set is supplied, to determine if there is enough time left for the data set to be transmitted within the required time period, at its current priority status (specification, page 3, lines 3-12). A processor of the system allocates a maximum time frame by which certain data sets must be transmitted. These maximum times will vary depending on the data concerned (specification, page 3, lines 3-12).

The processor 31 monitors the elapse of time for each data set from the time the data was generated or supplied to the transmitting means, to determine if the time remaining is sufficient for the data set at its current priority position in the pointer queue store (step 42) to still be received within the required time period (specification, page 7, lines 5-15).

If the processor 31 determines that the time is not sufficient, it will change (increase) the priority of the data set (step 43) in the pointer queue store in order to insure that the data set is sent within the time frame allotted for that data set. The processor 31 changes the priority of the data set by adjusting the content of the pointer queue store 35.

The Office Action correctly notes that *Lappington* "... fails to teach a method of monitoring the data being transmitted . . . and changing the priority of the monitored data, which has been determined . . . will be received outside the satisfactory time period so that it can transmit the data to be received within the satisfactory predetermined time period." In other words, *Lappington* does not show or teach a way of monitoring the data for any purpose, let alone for the purpose of determining whether the data will be received outside of a predetermined satisfactory time period. Furthermore, *Lappington* does not show or teach the

adjustment of the priority rating of data so as to insure that the data is received within a required predetermined time period.

Lappington simply teaches a method of transmitting and receiving data which is inserted into the vertical blanking interval (VEI) of the television signal (column 8, lines 16-51, and columns 17, 18 and 19). The apparatus of *Lappington* which inserts data into the vertical blanking interval can also assign priority to the data and transmit the data according to the assigned order of priority. Completely missing is a showing, teaching or motivation for providing a method of monitoring the data being transmitted in order to determine whether the data will be transmitted within its required predetermined time period.

The Office Action refers to *Lyons* for a teaching of "... changing the priority of the monitor data, which has been determined will be transmitted so as to be received outside the satisfactory time period (see Column 9, Lines 11-25 in claim 7) so that it will be transmitted to be received within the said satisfactory predetermined time period (claim 7, Column 9, Lines 3-8)."

Applicant respectfully traverses. The *Lyons* reference discusses the treatment of "opportunistic data" by the system, wherein the owner of this data contracts with the packet transport system provider to transmit this block of data within a predetermined time period (column 5, lines 55-60). The packet transport system handles the opportunistic data by determining the number of packets needed to carry this data, according to a formulation. The size of the opportunistic data is divided by the amount of data carried in each packet in the packet transport system. Then an interval between packets is calculated by dividing the time period for transporting the opportunistic data by the number of packets. *Lyons* gives the example, if the block of opportunistic data is to be transmitted within eight hours (28,800

seconds), then a packet must be transmitted at least every 2.88 seconds (column 5, lines 61-68, column 6, lines 1-3). A time clock in the microprocessor 50 is then set to notify the microprocessor 50 every 2.88 seconds. In response to that notification, the microprocessor 50 inserts an entry for the opportunistic component signal source into the highest priority entry in at least one of the priority queues. In this manner, a packet of data from the opportunistic data source is placed in the packet stream. After this has been accomplished, the microprocessor tells the scheduler to form packet groups from the original set of prior lists until the next time the microprocessor 50 is notified by the clock that another opportunistic packet is required. The processor then again repeats the above procedure (column 6, lines 3-20). In this manner, the opportunistic component signal source 7 is guaranteed that its data is transmitted within the contracted for predetermined time period.

As is quite evident from a review of *Lyons* and Lyons' process for treating the transmission of opportunistic data within the contracted-for predetermined time period, the *Lyons* system does not monitor the data to be transmitted as required by the present invention. The monitoring step of the present invention allows the system to update the priority of the data as needed, i.e., the highest priority may not be needed in order to insure that the data is transmitted within its required time slot. *Lyons*, on the other hand, sets each packet of data into the highest priority slots each time a packet is to be sent. These pockets are sent, not on the basis of monitored condition, but rather on the basis of a periodic fixed clock signal. Neither *Lappington* nor *Lyons* discusses, teaches or eludes to a monitoring system as claimed.

Applicant respectfully requests that this rejection be withdrawn.

In light of the above remarks, Applicant believes that all the claims are in condition for allowance and respectfully requests that all the claims be allowed and this case passed to issue.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231 on January 14, 2003.

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Signature

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Very truly yours,

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